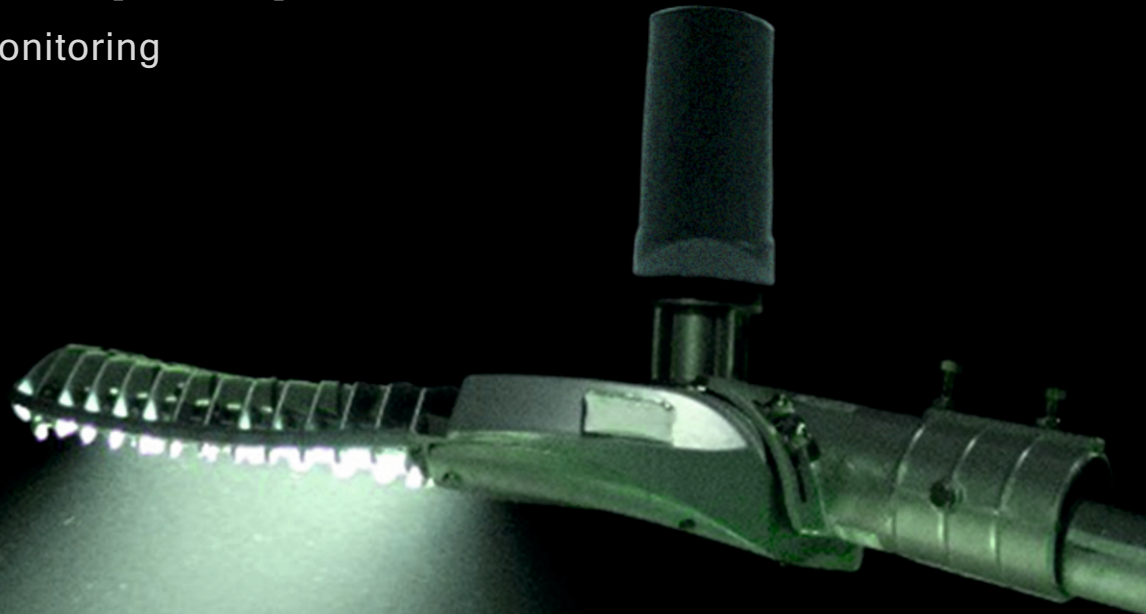


# LUMINODE (ILM)

Individual Lamp Monitoring



schnell

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- www.schnellenergy.com
- 6/4, Lions Club Building, Ranganayaki Nagar,  
Periyanaickenpalayam, Coimbatore - 641 020.



ANSI  
NEMA

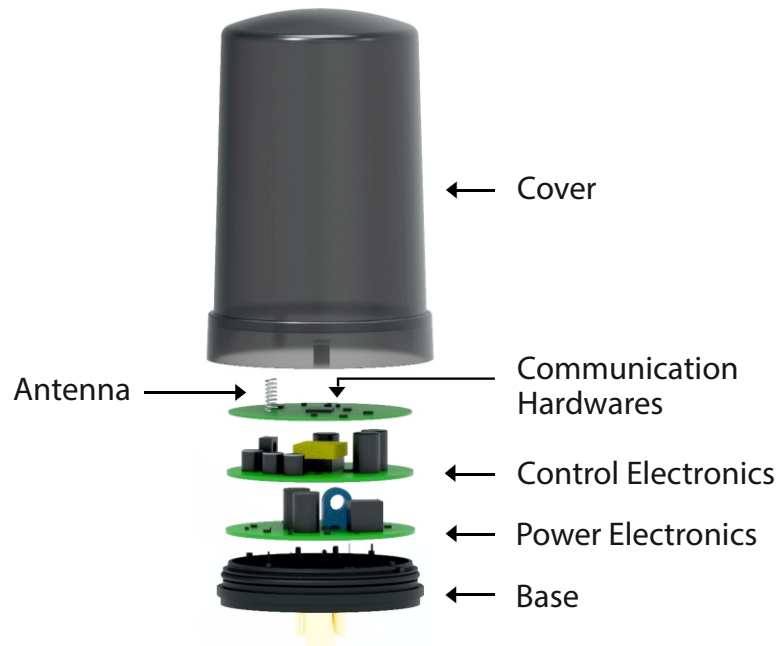
**NB-IoT**

# SMART STREETLIGHTING

Schnell SMART system for street lighting is designed to gain complete control over operation, monitoring and sophisticated maintenance of each and every individual streetlight. The solution mainly consists of a control gear which includes NBloT based individual lamp control nodes (LumiNodes) for accessing and controlling individual lamps. These nodes connect and interact with the Centralized Server for monitoring and controlling the lamps

## LUMINODE

Luminode is the individual streetlight controller. It connects directly and seamlessly to the centralized streetlight server via NBloT/LTE-CAT-M1 technology. It is the terminal that Monitors and controls the streetlight. It features an easy plug and play installation using standard 3/5/7pin ANSI C136.41 NEMA type interface.

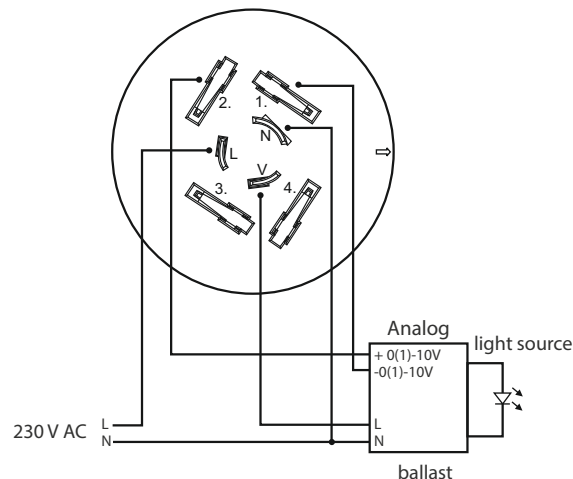




# FEATURES OF LUMINODE:

- ◆ Wireless control and monitoring of street lamps on an individual basis
- ◆ ON/OFF/Dimming control of lamps and Live status
- ◆ Sleep mode option
- ◆ Individual controllability of device from the "Centralized Streetlight Control Server"
- ◆ Integrated with web and android mobile software
- ◆ Simple configuration and easier maintenance
- ◆ Over the air ( OTA ) Firmware update

Connection 0 (1) - 10 V (analog)



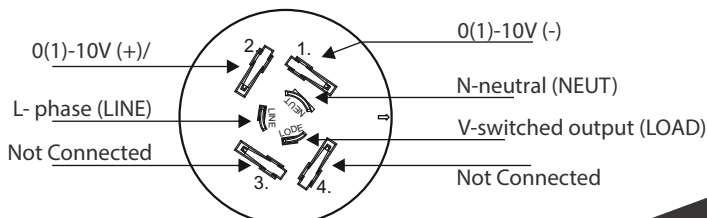
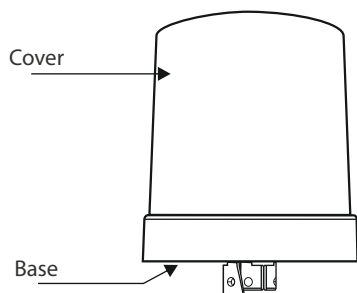
Description of wiring

contacts:

- |                    |                            |
|--------------------|----------------------------|
| 1. 0(1) - 10 V (-) | L (LINE) - phase           |
| 2. 0(1) - 10 V (+) | N ( NEUT) - neutral        |
| 3. Not Connected   | V (LOAD) - Switched output |
| 4. Not Connected   |                            |

# FUNCTION:

- ◆ When the power is connected, the device sends the initial message containing the status of the luminaire.
- ◆ Device will work on the three different modes, such as manual, automatic and photo cell mode.
- ◆ Mode setting will be down through message from server / gateway.
- ◆ Manual Mode : Can ON/OFF-DIM the device instantaneously through server / gateway
- ◆ Photo Cell Mode : Device will work based on the light intensity.
- ◆ Automatic Mode : Device will work based on Pre-defined Time slot setting
- ◆ Device will send event notifications instantly if any event occurs.



## TECHNICAL SPECIFICATIONS:

Lamp type	: LED
Connection type	: ANSI C136.41 NEMA type - 3/5 Pin
Maximum load handling capacity	: 500W
Operation mode	: ON / OFF / DIM
Dimming range	: 10% to 100%
Dimming steps	: Stepless
Dimming control interface	: 1 to 10 V
External interface	: -
Network interface	: NB-IOT   CAT-M   GPRS   EDGE
Data transfer (kbps)	: CAT-NB 127(DL)/158.5(UL)   CAT-M 589(DL)/1119(UL)   EGPRS 296(DL)/236.8(UL)
Firmware update	: OTA*
Precision real time clock	: Battery operated
Real-time lamp protection	: Yes
Security	: TLS1.2*
GPS	: Yes*
Operating voltage range	: 85V to 440V [max. up to 500V Continuously for 24 hours]
Surge protection	: 6 kV / 3 kA
Average power consumption	: 4 VA
Maximum power consumption	: 5 VA
Weight	: 270 grams
Internal storage	: 25 events per day [can be increased in firmware]
Photo cell	: Optional
Parameter measured	: Voltage, Current, Active Power, Power factor, Energy consumption, Lamp burning hours
Schedule configuration	: Predefined Schedule / Astronomical clock (optional)
Start mode	: Photocell / Schedule
Threshold configuration	: [Over / Under Voltage] - [Over /Under Current]
Configurable parameters	: Electrical and functionality#
Faults / Alarms	: [Over / Under Voltage] - [Over /Under Current] - [Lamp Failure]
Certifications	: FCC (under progress)



\* Available in Next Release

#Electrical Threshold parameters like Voltage (min/max), Current (min/max), Power (min/max), Minimum load value, no load value. Functionality parameters like slot level, Lamp brightness level, operating mode (auto/Manual/test), Publish interval time, Web Server URL, Software port, Timestamp.